MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

CLASS COST-OF-SERVICE AND RATE DESIGN

MISSOURI GAS ENERGY

A Division of Southern Union Company

CASE NO. GR-2009-0355

Jefferson City, Missouri
September 2009

** Denotes Highly Confidential Information

Staff 43

Case No(s). GR-2009-0355 NP
Date 10-26-09 Rptr KF

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF THOMAS A. SOLT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Thomas A. Solt, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 2-7, and the facts therein are true and correct to the best of his knowledge and belief..

Thomas A. Solt

Subscribed and sworn to before me this 3rd day of September, 2009.

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF DANIEL I. BECK

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Daniel I. Beck, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 7-8, and the facts therein are true and correct to the best of his knowledge and belief..

Daniel I. Beck

Subscribed and sworn to before me this 3rd day of September, 2009.

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF ANNE E. ROSS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Anne E. Ross, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that she has participated in the preparation of the accompanying Staff Report on pages 9-15, and the facts therein are true and correct to the best of her knowledge and belief..

Anne E. Ross
Anne E. Ross

Subscribed and sworn to before me this 3rd day of September, 2009.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Susan L. Sundermeyer
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF HENRY E. WARREN

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Henry E. Warren, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 15 – 17, and the facts therein are true and correct to the best of his knowledge and belief..

Henry E. Warren

Subscribed and sworn to before me this 3rd day of September, 2009.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF MICHAEL J. ENSRUD

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Michael J. Ensrud, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that he has participated in the preparation of the accompanying Staff Report on pages 17 - 31, and the facts therein are true and correct to the best of his knowledge and belief..

Michael J. Ensrud

Subscribed and sworn to before me this 3rd day of September, 2009.

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942066

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF ANNE M. ALLEE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Anne M. Allee, employee of the Staff of the Missouri Public Service Commission, being of lawful age and after being duly sworn, states that she has participated in the preparation of the accompanying Staff Report on pages 31-33, and the facts therein are true and correct to the best of her knowledge and belief..

Anne M. Allee

Anne M. Allee

Subscribed and sworn to before me this 3rd day of September, 2009.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Susan L. Sundermeyer
Notary Public

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CLASS COST-OF-SERVICE
AND
RATE DESIGN

CLASS COST-OF-SERVICE REPORT

I. Executive Summary

Staff has conducted a Class Cost-of-Service Study in this case and allocated costs to the customer rate classes of Missouri Gas Energy (MGE or Company). Staff recommends no shift of cost between the classes. Staff computed peaks as part of its computation of the Staff Class-Cost-of-Service calculation. Upon further investigation, Staff has determined that the Large Volume Service Customer's revenue included in the Staff's Accounting Schedules, was understated by approximately $3 million. This has the effect of decreasing the Staff's overall revenue requirement by approximately $3 million.

Staff's rate design proposal includes the continuance of the Straight Fixed Variable (SFV) rate for the Residential class and adding the Small General Service (SGS) Class to the SFV design. Staff's review of MGE's proposal relating to the SGS class indicates that the SFV rate design would send the proper price signal to this customer class and should be implemented. Staff recommends the Large General Service, Large Volume and Transportation customer classes continue to use the current rate design in place for these classes.

Staff supports MGE's proposed tariff changes. The first change eliminates the word "experimental" from the existing School Transportation Program (STP). The second tariff change eliminates the Experimental Low Income Rate (ELIR) tariff language. The third change involves major modifications to MGE's existing transport tariff. Staff is proposing a change to four miscellaneous tariff rates that include the collection and disconnection charge, transfer charge, reconnect charge and new connections charge.

Staff supports the continued energy efficiency programs MGE currently has in place and recommends the expansion of these to the SGS class. Staff is proposing to maintain the capacity release and off-system sales sharing percentages currently in effect, but is proposing to change the tiers within the sharing grid to reflect current activity.

II. Class Cost-of-Service

A. Fundamental concepts of gas Class Cost-of-Service

Cost-of-Service: total costs, prudently incurred by a utility in providing services to its customers in a particular jurisdiction.

Cost-of-Service Study: a study that analyzes total company costs, adjusts them in accordance with regulatory principles (annualizations and normalizations), allocates these costs to the relevant jurisdiction, and compares the allocated costs to the revenues the utility is generating from its retail rates, off-system sales, and other revenues. The results of a cost-of-service study are expressed in terms of additional revenue required for the utility to recover its cost-of-service.

Class Cost-of-Service (CCOS) Study: a quantitative analysis of the costs incurred by a utility to serve its various classes of customers. A Staff CCOS study consists of these steps: a) costs are categorized (functionalized) based upon the specific role they play in the operations of a local distribution company (LDC); b) costs are classified by whether they are customer related, demand related, or energy related; and, c) functionalized/classified costs are allocated to customer classes. The sum of all allocated costs to a customer class is called the cost-to-serve that class.

The cost-of-service of each customer class is compared to the annualized, normalized revenues the utility collects from each class through its rates during the test year, plus each

class' allocated share of revenues from off-system sales and other revenues. The results of a CCOS study are expressed in terms of additional revenue required from each class for the utility to recover its cost of serving that class.

Relationship between Cost-of-Service and CCOS: conceptually, class cost of service is a breakdown of the utility's jurisdictional cost-of-service. A cost-of-service study determines what portion of total company costs is attributable to the retail jurisdiction; a CCOS study determines what portion of retail costs is attributable to each customer class.

Cost Allocation: a procedure by which common or joint costs are apportioned among customers or classes of customers.

Cost Functionalization: the grouping of rate base and expense accounts according to the specific function they play in the operations of an LDC. The most aggregated functional categories are production, storage, transmission, distribution, customer accounting expenses, and other costs.

Customer Class: a group of customers with similar characteristics (usage patterns, conditions of service, usage levels, etc.) that are identified for the purpose of setting rates for gas service.

Rate Design: (1) a process used to determine the rates for a gas utility once total cost-of-service is known; (2) characteristics such as rate structure, rate values and availability that define a rate schedule and provide the instructions necessary to calculate a customer's gas bill.

Rate Design Study: while a CCOS study focuses on the revenue responsibility of customer classes, a rate design study focuses on the equitable pricing of the utility service provided to individual customers within each class. The rate design process attempts to recover costs in each time period (e.g., summer/winter or on-peak/off-peak) from each rate

component for each customer in a way that equates the cost of providing service with the amount the customer is billed in accordance with the rate schedule.

Rate Schedule: one or more tariff sheets that describe the availability requirements and prices applicable to a particular type of retail gas service. A customer class used in a CCOS study may consist of one or more rate schedules.

Rate Structure: rate structure is composed of the various types of monthly prices charged for the utility's products. At the most basic level there are: a) customer charges, a fixed dollar amount to be paid each month irrespective of the amount of the product taken; b) usage (energy) charges, a price per unit charged on the total units of the product consumed over the month; c) purchased gas adjustment (PGA) charges, which is a price per unit "pass-through" of gas costs; and, d) demand charges, a price per unit charge for gas consumed over a 24-hour period of time. One criterion for determining the appropriate rate structures is the accuracy with which the structure tracks costs. Another criterion deals with the ease or difficulty in administering the rate, as well as the customer's understanding of how the rate structure works, i.e., what causes the customer to incur a higher or lower monthly bill.

Rate Values (Rates): the per-unit prices the utility charges to provide service to its customers. Rates are expressed as dollars per unit of volume (Ccf, Mcf) or per unit of energy (MMBtu, therm), etc.

Tariff: a document filed by a regulated entity with either a federal or state commission; it lists the rates (prices) the regulated entity will charge to provide service to its customers as well as the terms and conditions that it will follow in providing service.

Units of Measurement:

Btu: British thermal unit.

MMBtu: one million Btus. One MMBtu is approximately the amount of energy contained in 1,000 Cf (or 1 Mcf) of natural gas, 83.3 pounds of coal, 10.917 gallons of propane, 8 gallons of gasoline, or 293.083 kWh or electricity.

Cf: a unit of volume of one cubic foot of natural gas, which contains approximately 1,000 Btus of energy.

Therm: 100,000 Btus of energy, approximately equal to the energy contained in 100 Cf of natural gas.

B. General Description of the CCOS study filed in GR-2009-0355

The purpose of the Staff's CCOS study is to provide the Commission with a measure of relative class cost responsibility for the overall revenue requirements of MGE. For individual items of cost, the responsibility of a certain class of customers to pay that cost can be either directly assigned to a class or classes or allocated between the classes using reasonable methods for estimating the class responsibility for that item of cost. The results are then summarized so that they can be compared to revenues being collected from each class on current rates. The difference between a particular customer class' costs responsibility and the revenues generated by that customer class is the amount that class is either paying in excess of its costs (revenues greater than costs) or less than its costs (revenues are less than costs).

The annualized usage levels and customer bill counts for the Residential Service (RES), Small General Service (SGS), and Large General Service (LGS) classes were provided by Staff witness Amanda C. McMellen, and those for the Large Volume Service (LVS) class were provided by Staff witness Anne E. Ross. The class peak demand levels for RES, SGS, LGS and LVS customers were provided by Staff witness Daniel I. Beck. All accounting

information was developed using costs and revenues produced by the Public Service Commission (PSC) Auditing Department, which are based upon a test year ending December 31, 2008, updated for known and measurable changes through April 30, 2009, except for LVS revenues, which were developed by Staff witness Anne E. Ross, and differ from LVS revenues in the Staff's previously filed EMS run by an additional $3,140,296.

C. Customer Classes

The Staff analyzed the costs and revenues of the following customer classes:

Residential Service (RES)
Small General Service (SGS)
Large General Service (LGS)
Large Volume Service (LVS)

These classes correspond to MGE's current customer classes. The RES class is available to residential customers for non-business, non-commercial or non-industrial use at a single point of delivery. The SGS class is comprised of those small non-residential customers with usage through a single point of delivery consisting of not more than 10,000 Ccf per month. LGS customers are those non-residential customers with a single point of delivery whose usage is greater than 10,000, but not greater than 30,000 Ccf per month, and those who exceed 30,000 Ccf in any one month in a twelve-month billing period. LVS customers are those whose usage at a single address or location the Company expects will exceed 15,000 Ccf in any one month of a 12-month billing period.

The Company's costs were first categorized into functional areas that are to be allocated in the same way. This is referred to as cost functionalization. The rate base and expense accounts are assigned to one of the following functional categories: Storage, Distribution Mains, Distribution Measuring and Regulating, Purchased Gas Related, Distribution Meters, Distribution Regulators, Distribution Services, Customer Related,

Billing, Meter Reading, Assigned RES, SGS, and LGS, Assigned LGS and LVS, and Revenue Related.

Those costs which cannot be directly assigned into any of these specific functional categories are divided among several functions based upon some relational factor. For example, it is reasonable to assume that property taxes are related to gross plant costs and can therefore be functionalized in the same manner as gross plant costs.

The allocation factor for Distribution Mains, as well as those for Distribution Meters, Distribution Regulators, and Distribution Service Lines were determined by using the allocation factors developed by Staff witness Daniel I. Beck. Meter Reading costs were allocated using weighted customer numbers. Revenue Related costs were allocated based upon the Staff's annualized margin revenues.

The results of the Staff's CCOS study for MGE is shown on Schedule TAS 1-1. The CCOS study is presented in terms of class revenue requirements before any increase in the Company's respective revenue requirements. These results show that RES class revenues are slightly insufficient to cover their costs, while the SGS is overpaying the cost to serve them, and LGS and LVS are underpaying. Staff's recommendation, based on the CCOS study is to not make any revenue shifts among classes at this time.

Staff Expert: Thomas A. Solt

III. Allocations

The allocation factor for Distribution Mains that was developed by the Staff is Stand Alone/Integrated System factor. To determine the split between the Stand Alone and Integrated System components, the Staff analyzed data from a random sample of customers for the four customer classes to estimate the length of main required to extend the system to

that customer and used cost data provided by the Company. The Stand Alone cost component was then allocated to the classes using the same length and cost data. The Integrated System component was allocated using a Capacity Utilization factor. This Capacity Utilization factor uses estimated monthly peak day loads for each month of the year to estimate each class's year round use of the system. The month with the lowest system peak would be proportionally assigned to each class that used natural gas on that peak day and would reflect that this peak usage is needed for all months of the year. For all other months, the incremental system load (the difference from the previous month to the next month) is assigned proportionally to each class that used natural gas on that peak day and would reflect that this peak usage is needed for one to eleven months of the year. The resulting allocation factor is a value that is between the percent of volumes used by each class and the percent of peak usage on the peak day of the year by each class.

For the allocation of Distribution Meters, Distribution Regulators, Distribution Service Lines, Billing and Meter Reading, a weighted customer allocator was used. Data from the Company was used to develop the weights. For all allocators, the Residential Class is assumed to have a weight of 1 and the other classes typically had values greater than or equal to 1. For example, the Small General Service Class was given a weight of 2.57 based on data obtained from the sample to reflect the fact that its meters typically cost more than a residential meter.

Staff Expert: Daniel I. Beck

IV. Rate Design

A. Large Volume Transportation and Sales Service Peak Demand

The LVS customers' peak day demand was estimated, and this was provided to Staff witness Daniel I. Beck.

The LVS customer class contains commercial and industrial customers, whose 2008 usage ranged from around 16,000 Ccf to over 17,000,000 Ccf in the test year. There are several schools and large retail operations in this class that appear to be weather sensitive. Other customers, such as large industrial customers, or concrete plants, are not. The first step in calculating a peak day demand was to separate customers into two groups – one group containing the customers who appeared to be weather sensitive, and a second group that contained the remainder of the LVS customers.

The test year usage of customers who appeared to be weather sensitive was weather-normalized as described in the staff cost-of-service report filed on August 21, 2009, in this case. A product of the Staff's weather normalization analysis is an estimate of peak day usage; this number was used to represent the weather-sensitive customers' usage contribution to the LVS class peak demand.

The remaining customers' January and December monthly usage was added together and divided by 2 to determine an average month's usage, then divided by 22 to reflect the fact that some of these customers do not operate on weekends and/or holidays that occur in December and January. The result of this calculation was added to the estimate of the LVS weather-sensitive usage, and given to Staff witness Daniel I Beck to use in the calculation of a Distribution Mains allocator for the Staff class cost-of-service.

B. MGE's Proposed Residential Rate Design

MGE proposes that the current Straight Fixed Variable (SFV) Residential rate structure be continued. This rate design recovers non-gas costs through a monthly fixed charge. The customers' gas costs are recovered through the per-unit PGA charge. Staff supported this rate design in the previous rate case, and continues to do so.

Collection of the Residential customers' cost-of-service in a fixed monthly Delivery Charge is an equitable and reasonable way to recover costs from the customers in this class. This rate design reflects the fact that a difference in the cost of serving two Residential customers is not driven by the size of the customer's load; in fact, the difference between individual Residential customers' annual volumes is miniscule when you consider the fact that the largest customer on the MGE system used over 17 *million* Ccf in the test year, while the average Residential usage is 885 Ccf per year.

While Staff is aware that any LDC is going to have a few mansions in its Residential customer class, huge Residential customers are the exception, rather than the rule, and it muddies the waters to point to those few, when trying to design fair rates for the majority of the customers in this class. The majority of customers in the Residential class fall within a relatively small band of usage, and Staff has not seen any evidence that a difference of a few hundred Ccf per year creates a difference in the costs incurred to serve two customers. Any difference in the cost to serve two Residential customers is more likely driven by factors other than customer size, such as distance from the transmission pipeline, customer density in the area, the terrain in the customer's geographical area, or the exact age and depreciated cost of the equipment serving the customer. Traditionally, we do not charge Residential customers

different amounts to reflect these factors, and Staff does not propose that we begin doing so now.

The SFV rate design more closely aligns the Company's and customers' interests regarding conservation, and enables MGE to actively promote conservation without harming their shareholders because revenues from Residential customers no longer depends on Residential customers' usage. Before this rate design went into effect in the last MGE rate case, cost recovery and profits were directly tied to the amount of natural gas MGE's customers used, so MGE had no incentive to educate or assist its customers regarding conservation measures; in fact, by doing so, the Company was actually harming its shareholders by lowering its ability to recover its cost of service.

Concurrent with the SFV rate design's adoption, MGE began researching and implementing energy efficiency programs for its Residential customers. These energy efficiency programs are available to all Residential customers as the result of a fund of $750,000 that was authorized by Commission Order for this purpose in the previous rate case. These programs were developed with the assistance of the Energy Efficiency Collaborative (EEC) established for this purpose by Commission Order in Case No. GT-2008-0005, filed subsequent to the previous rate case. The programs developed by the EEC have been coordinated with the City of Kansas City's Metropolitan Energy Center, the Kansas City Power & Light Company, The Empire District Electric Company and other agencies and organizations in the MGE service area. Thus the SFV rate design has resulted in the establishment of energy efficiency programs and the promotion of energy efficiency in the MGE service area. Consequently, Staff is of the opinion that the SFV rate design should be continued along with the $750,000 of funding for energy efficiency programs. The

Unanimous Stipulation and Agreement (Agreement) in Case No. GT-2008-0005 established the EEC. Section II.3 of the Agreement contains a sunset provision for the EEC so that it will discontinue when the rates become effective as a result of this rate case. Staff concurs with this provision of the Agreement that the EEC has served its purpose and does not need to continue.

The SFV rate design provides an appropriate price signal to prospective customers, thus protecting current customers. When a new customer hooks up to the MGE system, there are costs involved – both immediate and long-term. As discussed above, these costs are not driven by the amount of gas the individual Residential customer will use.

For example, the utility must run pipe to connect the customer to its distribution main, provide metering equipment, etc, for these customers; and this cost investment does not vary based on whether the customer plans to use gas only to barbecue a steak or heat their home. The smallest diameter service line and meter is sufficient to serve the load generated by existing Residential end-uses, such as space- or water-heating, gas fireplaces or barbecues, dryers, and stoves.

When making long-term investment decisions, the utility must take into account the ability of Residential customers to change their end-use gas consumption at any time, making it impossible to predict exactly what each individual household is going to 'need' from the local distribution system in the future. Furthermore, the consequences of missing the mark in sizing equipment are expensive – for example, even if it was possible to exactly size a main to meet expected future demand, it would be very expensive to dig up and install a new main if any Residential customer's usage increased or decreased in the future. Thus, even in the long-term, the investments that MGE makes to serve its Residential customers will not exactly

reflect the amount of gas each customer uses. Many of the capital investments have an expected life of over 40 years

When a very small user pays a volumetric rate, they underpay their share of these costs, and Residential customers using more than the average pay more than their share.

A fixed charge which accurately reflects the nature of the cost MGE incurs to serve a Residential customer sends a clear price signal to a customer who is making their energy decisions as to costs and benefits of that decision. It is illogical to hook up a customer who clearly will not pay their cost of service, and it is unfair to allow one customer to take service while expecting another Residential customer to pay for that service.

C. MGE's Proposed SGS and LGS Class Restructuring

MGE proposes that the Company's existing Small General Service and Large General Service rate classes be restructured.

Currently, a customer is served in the Small General Service rate class if their usage does not exceed 10,000 Ccf in any one month. Under the Company's proposal, a customer will be classified as Small General Service if their usage is less than 10,000 Ccf on an annual basis.

A customer is currently served in the LGS rate class if their usage exceeds 10,000 Ccf in at least one month, but does not exceed 30,000 Ccf in any month. Under the Company's proposal regarding usage requirements for the Large General Service rate, an LGS customer will be one whose annual usage exceeds 10,000 Ccf, but whose usage does not exceed 30,000 Ccf in any one month.

Staff has reviewed the Company's analysis of the current and proposed customer classes, and believes that the proposed parameters for the SGS and LGS customer classes are reasonable because they provide for a more homogenous customer class.

D. MGE's Proposed Rate Design for the 'New' SGS Class

MGE has proposed recovering the non-gas costs from its newly defined SGS class via a flat monthly charge. Staff agrees that this is an appropriate and fair method to use for this class. SGS customers have more end-use options than Residential customers, such as large fryers, dishwashers, or water heating for restaurants and laundries, but many of these are small business customers that only use natural gas for space heating. The customer loads are small, and the difference between two customers' loads even smaller. If there is any real difference in the cost to serve any two customers, it is likely driven by factors other than customer size, such as distance from the transmission pipeline, customer density in the area, the terrain in the geographical area surrounding the customer, or the exact age and depreciated cost of the equipment serving the customer. Traditionally, we do not charge different rates to reflect these factors, and Staff does not propose that we do so now.

E. MGE's Proposed Rate Design for the 'New' LGS Class

MGE has proposed that the customers in the restructured LGS class pay an increased share of their costs in the form of a fixed charge, with the remainder of these customers' cost-of-service collected in a two-block volumetric rate. Staff has reviewed the Company's proposal, and concurs.

F. MGE's Proposed Rate Design for the LVS Class

MGE has proposed an equal percentage increase to the non-gas rate components for the LVS customers. Staff believes that this proposal is reasonable, but asks that MGE commit

to performing costs studies in the next rate case that can be used to determine whether this class should be further separated on the basis of size or load factor.

G. Elimination of the Winter/Non-Winter Difference in the SGS, LGS, and LVS Non-Gas Rates

Staff believes that it is appropriate to eliminate the seasonal differential in MGE's non-gas rates.

Staff Expert: Anne E. Ross

V. Peak Calculation & Energy Efficiency

A. Weather-Normalized Coincident Peak Day Demand

Staff determines weather-normalized coincident peak day demand by customer class. Staff calculates the estimated usage per firm customer by customer class based on Staff witness Manisha Lakhanpal's computed normally occurring monthly or winter season (December – February) coldest days. The estimated use per customer per day is based on the regression of monthly use per customer per day and monthly heating degree days (HDD). The daily peak is the highest daily load or draw of natural gas on a system and the demand is the rate or amount of natural gas used on that day. My estimates of each class customers' natural gas peak usage -- residential (Schedules 4.1 – 4.3), small general service (Schedules 4.4 – 4.6) and large general service (Schedules 4.7 – 4.9) -- are at the time (coincident) of a utility's system daily peak.

Staff estimates weather-normalized coincident peak day class demands because these estimates determine the relative responsibility of the residential, small general service, and large general service customers for that estimated single-day system peak. For cost-of-service studies, it is important to determine each class' contribution to the peak day responsibility.

Schedules 4.1 – 4.9, attached to this testimony, contains the estimated weather-normalized coincident peak day natural gas usage in Ccf per customer by billing month and customer class for MGE's Joplin, Kansas City, and St. Joseph geographic regions. This information was provided to Staff witness Daniel I. Beck of the Commission's Energy Department, Engineering Analysis Section for his calculation of total peak day demand across MGE's firm customer classes.

B. Energy Efficiency Programs and Collaborative

As a result of the Commission's Report and Order (Order) in Case No. GR-2006-0422, Natural Gas Conservation Programs were funded through rates at $705,000 annually. Subsequently, MGE filed tariff sheets to establish Residential Natural Gas Conservation Initiatives. The Office of the Public Counsel filed a *Motion to Suspend Tariff and Motion to take Administrative Notice.* This resulted in the Commission's *Order Approving Unanimous Stipulation and Agreement* (Agreement) in Case No. GT-2008-0005, which established an Energy Efficiency Collaborative (EEC) to oversee the design and implementation of MGE's energy efficiency programs. The charter members of the EEC are MGE, Commission Staff, Public Counsel, and Department of Natural Resources. In the Unanimous Stipulation and Agreement in Case No. GT-2008-0005, Provision II.3 provides, "The provisions of this Stipulation and Agreement will no longer be effective as of the date that new rates become effective for MGE as a result of a future general rate proceeding." Staff concurs with this provision that the EEC established as a result of Case No. GT-2008-0005 should no longer be in effect as of the date when new rates from this case become effective. Staff does support the continued funding of $705,000 for energy conservation programs and $45,000 for education on energy conservation. As a result of the EEC, Applied

Energy Group (AEG) produced a study to develop, implement, and evaluate a High Efficiency Natural Gas Water Heating and Space Heating Incentive Program, a Home Performance with Energy Star® Program, and an Outreach and Education Program. MGE has subsequently filed tariff sheets and received Commission approval for these programs. As a result of these actions, it is appropriate for the EEC to cease as provided in Section II.3 of the Agreement. The funding for Conservation and Education as provided in the Order should continue, and additional programs should be developed for the residential customers and the other customer classes. Similarly, the Weatherization Program in the MGE tariff has been effective in improving the energy efficiency of the homes of income eligible customers, and the funding of $750,000 annually for the program should be continued.

Staff Expert: Henry E. Warren

VI. Miscellaneous Tariff Issues

A. School Transportation Program / Eliminates the Experimental Low Income Rate / Transport Tariff

1. Elimination of "Experimental" From the Title of the Existing School Transportation Program (STP)

Staff agrees with MGE's proposal to eliminate the word "experimental" from the existing STP. The program is no longer experimental as it has been in place for approximately six years and the Legislature has extended the program "until terminated by the commission." (§ 393.310.7)

2. Elimination of the Experimental Low Income Rate (ELIR) tariff language

In its September 21, 2004 Report & Order (in Case GR-2004-0209), the Commission concluded the ELIR was not working as intended and permitted it to expire:

> The ELIR is an interesting attempt to make natural gas bills more affordable for low income customers while ultimately saving money for MGE and its

other ratepayers by reducing expenses that result from bad debts. **However, it is only an experimental program and it has had problems.** For example, nearly half of the participants that initially entered the program dropped out by January 2004.144. The Commission is not willing to pour more ratepayers funds into this program, particularly without the agreement of MGE. **The Commission will allow the program to continue in its current form through July 2006, or until funding runs outs, which ever occurs first.** (emphasis added)

The program has ended and Staff concurs with MGE's proposal to eliminate the ELIR tariff language.

3. Proposed Changes to MGE's Commercial Transport Cash-Out Provisions

While there are a number of language changes spread throughout the "Transportation Provisions" (TRPR) section of the tariff (pages 59 through 67), the most significant changes in the transportation tariff are:

- MGE proposes to reduce the "Tolerance Levels" for imbalances used to determine the price a transport customer receives when selling excess gas to MGE, or pays when buying needed gas from MGE. (Proposed Tariff Sheet Nos. 61.1 & 61.2)
- MGE proposes to eliminate the existing tariff clause requiring MGE to pay the transport customer "the firm transportation charges included in the current PGA rate to bring the gas to the Company's system". (Current Tariff Sheet No. 61.2)
- MGE proposes to change the mathematical formula used to calculate the imbalance percentage used in the Cash-Out mechanism. (Proposed Tariff Sheet No. 61.1 & 61.2)
- MGE proposes to change the existing language addressing the under-nominated price for gas purchased from MGE by transport customers to "the

higher of the index price for the business month or the index price of the month immediately following the business month". (Proposed tariff Sheet No. 61.2)

- MGE also proposes to change the existing language addressing the over-nominated price" for gas sold to MGE by transport customers to "the lower of the index price for the business month or the index price of the month immediately following the business month." (Proposed tariff Sheet No. 61.2)

Each of these proposed changes is discussed below.

Transport Tariff Background and Application

The transport tariff is applicable to those customers (usually large industrial or institutional customers) who buy their gas from a party other than MGE – referred to as "the supplier." Transport customers continue to use MGE's pipeline system to deliver the gas to their premises.

The charge for delivery is reflected in the transportation tariff rates of MGE. A customer is said to over-nominate or under-nominate when the transport customer's actual consumption of gas either exceeds, or is less than, the volume of gas delivered to MGE's system. While over-nominations/under-nominations are not totally avoidable, the transport customer, or its agent, has control over the amount of gas it orders for delivery to MGE's system. In its response to Staff DR 129, MGE states: "The party making the nominations is responsible for balancing the requirements of usage, nominations and transportation." Staff agrees with MGE that the party responsible for imbalances should be accountable.

When transport customers either under-nominate or over-nominate, MGE needs a method to correct the imbalances. MGE uses "cash out" to bring imbalances to zero at the close of the month. Although the term for "settling up" under-nominations or over-

nominations is "cash out", cash "flows in" to MGE when MGE sells gas and "flows out" when MGE buys gas.

This financial settlement of imbalances takes place at the end of each month based on the net imbalances occurring during the month. This monthly method of basing compensation on net imbalances allows transport customers an opportunity to eliminate any cumulative imbalances occurring during the month.

MGE uses an index price to determine the price of the gas when it pays a customer for excess gas, or when it charges a transport customer for gas MGE supplies. Currently, the same index price is used when the transport customer buys or sells gas to correct an imbalance.

The current tariff describes the "index price" as follows:

> (a) Index Price: The index price shall be determined as the arithmetic average of the first-of-the-month index prices published in Inside F.E.R.C.'s Gas Market Report for the month immediately following the month in which the imbalance occurred, for
>
> > Southern Star Central Gas Pipeline, Inc. f/k/a Williams Gas Pipeline Central Inc. (Texas, Kansas, Oklahoma) (If Inside FERC's Gas Market Report does not publish an index price for Southern Star, then the alternate index price approved by FERC for use by Southern Star Central will be substituted.)
> > And Panhandle Eastern Pipe Line Company (Texas and Oklahoma) (Sheet No. 61.3)

Generally, when MGE sells more gas than nominated to a transport customer, MGE is diverting gas intended for its "firm" customers. Likewise, when MGE purchases excess gas from transport customers, that gas will, likely, be resold to "firm" customers. Even when this scenario is not physically true, the financial impact occurs when the dollars of the transaction are "flowed through" the PGA pricing mechanism.

Staff Conclusions and Recommendations on the Proposed Transport Tariff Changes

The ability of transport customers to buy and sell gas from MGE is far more beneficial to the transport customer than to MGE or its "firm" customers. Therefore, it is reasonable to protect the interests of the "firm" customer by requiring transport customers to be responsible for correcting imbalances. Staff recommends the Commission adopt MGE's proposed changes to the "cash-out" tariff provisions to insulate the "firm" customers from the activities of the transport customers.

Detailed Discussion of the Proposed Transport Tariff Changes

Provided below is a detailed discussion of Staff's analysis of the major transportation tariff changes for over-nominations or under-nominations of gas.

While it is inevitable that a transport customer's daily shipments of gas on MGE's system, will not exactly match the transport customer's actual, daily usage, careful planning should, under normal circumstances, keep the amount of variance small. Even if uncontrollable events take place on a specific day that affect the daily imbalance, MGE's methodology allows the transport customer to take corrective action in subsequent days. The only exception is if the negative event occurs at the end of the month. The point is, careful planning can generally avoid imbalances and, in many cases, the opportunity for correction is readily available, while continuous, significant variances (either way) are more attributable to the actions or inactions of the transport customer or its agent.

Under normal circumstances, MGE plays little or no role in the amount of variance between what the transport customer nominates, and what the transport customer actually uses. Further, MGE lacks the ability to "fix" a transport customer's imbalance. When over-

nominations or under-nominations occur, these errors in estimates are the responsibility of the transport customer, not MGE.

Reduced Tolerance Levels

It is typical in designing imbalance compensation mechanisms to incorporate a provision that correlates increasing "penalties" with increasing imbalances (measured as the difference between the transport customers nominated amounts and actual usage amounts). MGE and its "firm" customers typically have no control over a transport customer's imbalances. The higher a transport customer's imbalance, the greater the obligation imposed on MGE and MGE's "firm" customers to offset the imbalance. Correlating increasing "penalties" with increasing imbalances is theoretically sound because a system of increasing penalties acts as a deterrent to high imbalances. It is appropriate to have transport customers incur a larger percentage of discounts, if MGE is forced to absorb a larger percentage of excessive (unwanted) gas shipped from a shipper. If MGE is forced to sell a larger percentage of gas initially purchased for the firm customer, then the transport customer who receives that diverted gas, should pay higher premiums.

Under -Nomination

In under-nomination situations, the transport customer purchases gas from MGE. The proposed "Tolerance Levels" set forth in the tariff, are being reduced as follows:

(i) (Under-nominated Receipts)
If Company's retainage-adjusted receipts (nomination) for the customer are less than deliveries (usage) to the customer (Under-nominated), the customer or the customer's agent shall pay:

1.00 times the index Under-nominated Cash Out Price for each MMbtu of imbalance up to and including ~~10%~~ 5% of usage nominations, plus

1.20 times the index Under-nominated Cash Out Price for each MMbtu of imbalance which is greater than ~~10%~~ 5%, up to and including ~~15%~~ 10% of usage nominations, plus

1.40 times the index Under-nominated Cash Out Price for each MMbtu of imbalance which is greater than ~~15%~~ 10% of usage nominations, plus

The "strike-through" percentage currently represents the tariffed Tolerance Level while the "blue" percentage represents MGE's proposed Tolerance Level.

Over-Nomination

In over nominated situations, the transport customer sells gas to MGE.

The proposed "Tolerance Levels" set forth in the tariff, are being reduced as follows:

(ii) (Over-nominated receipts)

If Company's retainage-adjusted receipts (nomination) for the customer exceed deliveries (usage) to the customer (Over-nominated), the customer or the customer's agent shall receive:

1.0 times the index Over-nominated Cash Out Price for each MMbtu of imbalance up to and including ~~10%~~ 5%, of usage nominations, plus

0.8 times the index Over-nominated Cash Out Price for each MMbtu of imbalance which is greater than ~~10%~~ 5%, of usage nominations, up to and including ~~15%~~ 10%, plus

0.6 times the index Over-nominated Cash Out Price for each MMbtu of imbalance which is greater than ~~15%~~ 10%, of usage nominations, plus

The "strike-through" percentage currently represents the tariffed Tolerance Level while the "blue" percentage represents MGE's proposed Tolerance Level.

The following tables summarize MGE's proposal to "shrink the tolerance levels" (reduce the thresholds for "penalties") from existing levels as part of this filing:

Proposed Changes in Over-Nomination

(In over nominated situations, the transport customer sells gas to MGE.)

Proposed Tolerance	**Current Tolerance**	**Difference**	**Percentage of the Price Index Paid**
0% up to 5%	0% up to 10%	5% less	100%
5% up to 10%	10% up to 15%	5% less	80%
10% or more	15% or more	5% less	60%

Proposed Changes in Under-Nomination

In under nominated situations, the transport customer purchases gas from MGE.

Proposed Tolerance	**Current Tolerance**	**Difference**	**Percentage of the Price Index Charged**
0% to 5%	0% to 10%	5% less	100%
Above 5% to 10%	Above 10% to 15%	5% less	120%
Above 10%	Above 15%	5% less	140%

Staff supports the change in tolerance levels proposed by MGE.

Changing the Formula of Calculating the Imbalance Percentage

MGE proposes to change the calculation that determines the imbalances percentage. MGE's proposed change affects only the denominator of the imbalance percentage formula. MGE proposes that actual usage replace nominations in the denominator of the formula. Under the existing tariff, the numerator of the calculation for the imbalance percentage is the

difference between nominations and actual usage while, the denominator of the formula is a customer's actual nominations.

The significance of the proposed change is that the formula, once changed, would measure imbalances relative to actual usage, rather than imbalances relative to nominations.

While not in opposition to the proposed change in calculation, Staff notes what MGE is proposing is unique. Currently AmerenUE, Empire and Atmos utilize nominations as the denominator in their calculations for cash-out premiums, consistent with MGE's current tariff. MGE would be the first to use an alternative to the nominated amount of gas as the denominator in these calculations, when determining the degree of penalty to impose, and replace the customer's "actual usage" in the denominator when calculating the percentage that determines the magnitude of penalty.

Staff's analysis is that this change has little overall impact on transport customers and the PGA. MGE claims that from January to May 2009, if the proposed method of calculation (actual usage replacing nomination in calculating percentage) had been in place, such "a change would result in MGE billing the transport customer **$5,655.04 less in cash out fees.**" (Emphasis added). (See MGE's Response to DR 0183) This supports Staff's contention that this change has little overall impact.

Staff can detect no dramatic impact from allowing MGE to convert to using "actual usage", from "nominations", in the denominator of the imbalances formula. Staff recommends MGE be allowed to revise its initially-proposed method of calculation.

Elimination of Transportation Charge for Over Nominations

MGE's justification for stopping the practice of paying transport customers the PGA transport charge is as follows:

MGE has also removed the PGA transportation component when purchasing monthly cash out supply. MGE has already incurred this cost in the PGA and does not require this additional cost to purchase incremental supplies for the commodity customer. These provision changes will reduce the impact of cash out to MGE commodity customers.

(Direct Testimony –Michael R. Noack / Page 25 Lines 15-19)

Staff concurs in this position. MGE has sufficient capacity on the pipeline to meet its needs. If MGE has purchased the capacity to meet its long-term needs, there is no need to utilize the transport customer's capacity. MGE buys capacity based on its maximum demand calculation. Very seldom does MGE meet its maximum load. There is no avenue for MGE to "ratchet down" the capacity to meet short-term volumes being shipped. In short, MGE gains nothing by the transport customer using its own facilities to deliver the unwanted gas.

The current tariff language is as follows:

(ii) (Over-nominated receipts)

If Company's retainage-adjusted receipts (nomination) for the customer exceed deliveries (usage) to the customer (Over-nominated), the customer or the customer's agent shall receive:

The firm transportation charges included in the current PGA rate to bring the gas to the Company's system (Emphasis Added) (Sheet No. 61.2)

MGE proposes to eliminate the **bold** language and to cease paying transport customers MGE's PGA transportation charge when the transport customer over nominates gas.

Elimination of the existing tariff clause requiring MGE to pay the transport customer the "firm" transportation charges included in the current PGA rate will likely have a significant effect. Staff's calculation shows that between July 2007 and May 2008, MGE paid transport customers (in composite) ** _____ ** in transport charges for over nominations. The biggest, single transport customer was paid ** _____ ** in transport charges during

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that time period. This change in tariff language would have reduced the PGA gas costs of the firm customers by ** _____ **, assuming this proposed policy had been in place for the period July 2007 to May 2008. In its response to DR 128, MGE states: "An estimate of the transportation charges paid for over nominations in 2008 is ** _____ **"

Establishment of Dual Index Point

Currently, the tariff contains:

> (b) Index Price: The index price shall be determined as the arithmetic average of the first-of-the-month index prices published in Inside F.E.R.C.'s Gas Market Report **for the month immediately following the month in which the imbalance occurred,** for **(Emphasis Added)**

If adopted, the proposed change would use dual index prices – one for over nominations and a different index price for under nominations.

The proposed tariff language is as follows:

> (i)(a) Under-nominated Cash Out Price
> The Cash Out Price for an under-nominated imbalance **shall be the higher of the index price for the business month or the index price of the month immediately following the business month** (Emphasis Added)
>
> (ii)(a) Over-nominated Cash Out Price
> The Cash Out Price for an over-nominated imbalance **shall be the lower of the index price for the business month or the index price of the month immediately following the business month** (Emphasis Added)

Under the proposed tariff, there are two points of time that could determine the index price. The price index could be either "index price for the business month or the index price of the month immediately following the business month."

Staff concurs that this pricing change is reasonable. MGE wants to curtail over nominations and under nominations to the greatest degree possible and ensure that transport customers are held accountable for their actions. Another reason for dual pricing is that it

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increases the likelihood that MGE and the "firm" customer are not economically harmed by "cash out" transactions. In short, the change helps safeguard the "firm" customer from any detriment.

Since the transport customer has more control over whether and when over nomination and under nominations take place, this dual-point pricing sends the proper message to those in control that they should take corrective action.

B. Miscellaneous Charges

MGE has proposed to change some specific miscellaneous rates, but leave other miscellaneous rates at their present level. Staff will address the following MGE proposed miscellaneous rates:

	Current Rate	MGE's Proposed Rate	Underlying Costs
Collection & disconnection	$8.00	$20.00	**$41.35**
Transfer Charge	$6.50	$15.00	**$16.47**
Reconnection Charge	$45.00	$65.00	**$64.30**
Connection - New	$45.00	N/A	**$67.63**

Staff has concerns that three of the four major miscellaneous rates do not cover their underlying costs. Staff has historically proposed miscellaneous rates on the underlying cost to provide those services. These charges are based on a cost-causation, per-job basis. It is important that these miscellaneous charges reflect MGE's cost of performing those services so the customer using the service pays for it.

Given the way rate of return regulation generally works, if the specific customer pays a rate less than underlying cost, a cross-subsidy is created and the remaining customers provide the extra contribution.

Not only has Staff had a history of recommending cost-based miscellaneous rates, this Commission has found merit in this position in past cases. For example, the Commission stated the following in its February 22, 2007 Report & Order in Case No. GR-2006-0387:

In addition, the Commission finds that it is reasonable to align the chargers with the actual cost to provide the service. (Page 26)

This reference is also in relation to the same type of miscellaneous charges as what Staff seeks in cost-based rates – "Connections, Reconnections and Transfer Charges" in MGE' current rate case.

1. The Reconnection Charges

Staff recommends a $65.00 Reconnection Charge, consistent with MGE's proposal. The Reconnection Charge is applicable after service has been disconnected – generally for non-payment. MGE's cost data supports the requested $65 rate per-occurrence. The change in rates will generate $1,500,501 annually. My proposed Reconnection Charge will increase these revenues by approximately $234,334 on an annual basis.

2. Collection & Disconnection

Staff recommends a $42.00 Collection & Disconnection Charge, as opposed to MGE's proposed $20.00 charge. MGE's cost data supports a $42 Collection & Disconnection Charge per-occurrence. Staff's change in rates will generate $1,713,261 annually. My proposed Collection or Disconnection Charge will increase these revenues by approximately $1,090,327 on an annual basis.

3. New Connection & Transfer Charge

MGE has a dual charge methodology in place for a customer to initiate service. Some customers can initiate service via a "Succession" (gas is currently turned-on) for a proposed $15.00 "Transfer" Charge. Other customers can initiate service via a "New Connection" (gas is not turned on) for a proposed $45.00 "New Connection" Charge. The customer has no control over the type of initiation they receive. MGE's prior action determines the type of service initiation a customer must pay to establish service. Staff proposes to blend these two charges together to produce one cost-based rate for the five different types of initiations.

Staff is proposing nothing new. Laclede already has a similar Service Initiation Fee. (See Laclede PSC MO No. 5 – 3rd Revised Sheet No 31-a) This was established in Laclede's most recent rate case, Case No. GR-2007-0208. The Service Initiation Fee is described as follows:

> *(a) revise service initiation fees to provide for Laclede to charge a lower ($25) to all applicable customers, regardless of whether service initiation required Laclede to visit the premises...* (Page 5)

Staff is proposing a $32.00 per Service Initiation Fee connection for each customer that establishes service. Staff's change in rates will generate $3,691,424 annually. My proposed Initial Installation Charge will increase these revenues by approximately $1,334,863 on an annual basis.

Summary of Staff's Position concerning Miscellaneous Charges

Staff's proposal concerning miscellaneous charges can be summarized as follows:

	Proposed Rate	Underlying Costs
Collection & disconnection	$42.00	$41.35
Initial Connection Charge*	$32.00	$31.19
Reconnection Charge	$65.00	$64.30

Staff's position is that these costs are essentially a cost of doing business and should be paid by the cost-causer and the party benefitting from these services.

Staff Expert: Michael J. Ensrud

VII. Capacity Release & Off-system Sales

An LDC contracts for the capacity it needs to meet its customers' demand on very cold days and, since customers' actual usage sometimes varies significantly from contract demand depending upon the weather, MGE does not need all of its capacity at all times. MGE uses its contracted capacity or space on interstate pipelines to transport gas supply to its distribution system. In order to reserve space, MGE pays capacity reservation fees, which are passed through to its customers via the Purchased Gas Adjustment (PGA) clause.

When MGE does not need all of its transportation capacity, it can "release" (sell) its unneeded capacity to other parties. MGE receives credits on its pipeline bills for the amount of capacity released to other parties. This credit reduces gas costs for its customers. These capacity release transactions are subject to Federal Energy Regulatory Commission (FERC) rules.

An off-system sale occurs when MGE sells natural gas to a customer outside of its service area. The sales of gas may be made at the wellhead or may require MGE to transport the gas to a different location to be sold. MGE makes a margin or profit from off-system sales, which is calculated by subtracting the cost of the gas supply, transportation, and fuel, associated with the sale, from the gross revenues received from the sale. Like capacity release, the off-system sales profit may also reduce the overall cost of gas to MGE's customers.

MGE's customers pay for all contracted capacity and all natural gas, however, as an incentive for MGE to work to maximize its capacity release and off-system sales, the Commission authorized MGE to keep a percentage, or share, of the profits from off-system sales and capacity release credits. MGE's current sharing percentages are shown below:

Annual Capacity Release Credits and Off-System Sales Margins	MGE Retention Percentage	Firm Sales Customer Percentage
First $300,000	15 %	85 %
Next $300,000	20 %	80 %
Next $300,000	25 %	75 %
Amounts Over $900,000	30 %	70 %

This means MGE is permitted to keep increasing amounts of profit up to a maximum of 30% of the off-system sales margins and capacity release credits, with higher sales resulting in greater profits for the company. Any portion MGE does not retain goes back to customers via the PGA process.

MGE's current sharing grid was approved by the Commission in Case No.GR-2004-0209. At that time, when the $300,000 tiers were proposed and granted by the Commission, MGE was achieving roughly ** _____ ** in annual capacity release credits and very little, if any, off-system sales margins. Since 2004, there has been a substantial increase, as

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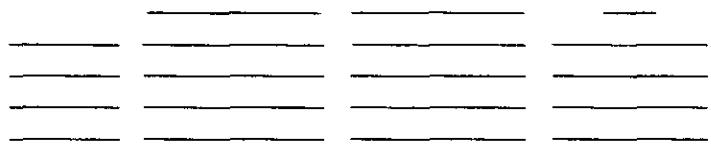
shown in the chart below. The off-system sales and capacity release levels for the most recent four Actual Cost Adjustment (ACA) periods are:

**



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Staff reviewed MGE's transportation contracts along with the historical levels of off-system sales and capacity release and proposes to maintain the sharing percentages but update the tiers to reflect the more recent level of activity. Staff proposes replacing the current sharing grid on MGE tariff Sheet No. 24.2 with the following:

Annual Capacity Release Credits and Off-System Sales Margins	MGE Retention Percentage	Firm Sales Customer Percentage
First $2,000,000	15 %	85 %
Next $2,000,000	20 %	80 %
Next $2,000,000	25 %	75 %
Amounts Over $6,000,000	30 %	70 %

Staff Expert: Anne M. Allee

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CLASS COST-OF-SERVICE

AND

RATE DESIGN

CREDENTIALS

Thomas A. Solt

Present Position:

I am an auditor in the Gas Rates and Tariffs Section of the Energy Department, Operations Division of the Missouri Public Service Commission.

Educational Background and Work Experience:

I have a Bachelor of Science degree in Business Administration from the University of Missouri—St. Louis, and a Master's degree in Public Administration from the University of Missouri--Columbia. I am a licensed certified public accountant, hold other professional certifications, and have been employed by the Missouri Public Service Commission since May, 1992, except for approximately four months in late 1997 and early 1998.

Daniel I. Beck, P.E.
Supervisor of the Engineering Analysis Section of the Energy Department
Utility Operations Division

Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102

I graduated with a Bachelor of Science Degree in Industrial Engineering from the University of Missouri at Columbia. Upon graduation, I was employed by the Navy Plant Representative Office in St. Louis, Missouri as an Industrial Engineer. I began my employment at the Commission in November, 1987, in the Research and Planning Department of the Utility Division (later renamed the Economic Analysis Department of the Policy and Planning Division) where my duties consisted of weather normalization, load forecasting, integrated resource planning, cost-of-service and rate design. In December, 1997, I was transferred to the Tariffs/Rate Design Section of the Commission's Gas Department where my duties include weather normalization, annualization, tariff review, cost-of-service and rate design. Since June 2001, I have been in the Engineering Analysis Section of the Energy Department, which was created by combining the Gas and Electric Departments. I became the Supervisor of the Engineering Analysis Section, Energy Department, Utility Operations Division in November 2005.

I am a Registered Professional Engineer in the State of Missouri. My registration number is E-26953.

Anne Allee

Educational and Employment Background

I am employed as a Regulatory Auditor with the Missouri Public Service Commission. I graduated from the University of Missouri in Columbia with a Bachelor of Science degree in Accounting in 1989. I am currently a licensed Certified Public Accountant in the state of Missouri.

During college and after graduation, I worked for Capital Bank as a Teller, New Accounts Representative, and temporary Branch Manager. I began employment with the Commission in 1990 as a Regulatory Auditor in the Accounting Department (now known as the Auditing Department). My duties included assisting with audits and examinations of the books and records of utility companies operating within the state of Missouri.

In October 1993, I obtained by current position as a Regulatory Auditor in the Procurement Analysis Department. Since that time, my responsibilities include reviewing and analyzing amounts charged by natural gas local distribution companies (LDCs) through the Purchased Gas Adjustment (PGA)/Actual Cost Adjustment (ACA) mechanism. Since my time in the Procurement Analysis Department, I have performed and/or assisted in performing numerous ACA reviews which include a review of LDC's capacity release and off-system sales transactions. Please see the attached table for a list of cases and issues in which I have filed testimony.

CLASS COST-OF-SERVICE

AND

RATE DESIGN

SCHEDULES

MISSOURI GAS ENERGY
CASE NO. GR-2009-0355
TEST YEAR ENDED DECEMBER 31, 2008, Updated Through 4/30/09

	TOTAL	RESIDENTIAL	SMALL GENERAL SERVICE	LARGE GENERAL SERVICE	LARGE VOLUME
RATE BASE	$599,727,395	$429,236,161	$109,398,462	$7,288,280	$53,804,492
REQUESTED RETURN	7.3220%	7.3220%	7.3220%	7.3220%	7.3220%
RETURN ON RATE BASE	$43,912,040	$31,428,672	$8,010,155	$533,648	$3,939,565
O & M EXPENSES	$96,815,889	$70,575,003	$16,942,874	$1,112,363	$8,185,649
DEPRECIATION EXPENSE	$29,276,082	$21,861,411	$4,949,488	$296,610	$2,168,572
TAXES OTHER THAN INCOME	$9,884,438	$7,117,710	$1,776,840	$117,339	$872,550
INCOME TAXES	$18,508,362	$13,246,782	$3,376,178	$224,926	$1,660,476
TOTAL EXPENSES	$154,484,771	$112,800,906	$27,045,380	$1,751,237	$12,887,247
TOTAL C-O-S	$198,396,811	$144,229,578	$35,055,536	$2,284,885	$16,826,812
OTHER REVENUES	$4,789,682	$4,470,049	$319,633	$0	$0
REQUIRED MARGIN REVENUE	$193,607,129	$139,759,529	$34,735,903	$2,284,885	$16,826,812
CURRENT MARGIN REVENUES	$183,013,018	$131,062,756	$35,889,208	$2,122,170	$13,938,884
ZERO REVENUE INCREASE PLUG	$10,594,111	$7,647,590	$1,900,736	$125,028	$920,757
C-O-S MARGIN REVENUES @ 0%	$183,013,018	$132,111,939	$32,835,167	$2,159,857	$15,906,055
REVENUE ABOVE (BELOW) COS	$0	($1,049,183)	$3,054,041	($37,687)	($1,967,171)
% INCREASE WITHOUT GAS COSTS	0.00%	0.80%	-8.51%	1.78%	14.11%
CLASS' SHARE OF TOTAL MARGIN REVENUES	100.00%	72.19%	17.94%	1.18%	8.69%
AVERAGE GAS COSTS	$0				
% INCREASE WITH GAS COSTS	0.00%	0.80%	-8.51%	1.78%	14.11%
CLASS' SHARE OF TOTAL REVENUES	100.00%	72.19%	17.94%	1.18%	8.69%

Schedule TAS 1-1

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: ***JOPLIN*** ***CLASS: Residential (RSM)***

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	67,377	9,867,605	305,564	2,035,155	4.5351	30.2055	4.4806
Feb	67,632	10,105,887	328,547	2,109,443	4.8579	31.1900	4.5972
Mar	67,489	7,791,534	264,448	1,679,845	3.9184	24.8907	3.7236
Apr	66,677	4,606,998	155,803	1,000,492	2.3367	15.0051	2.3527
May	65,574	2,439,285	78,299	485,650	1.1941	7.4061	1.2989
Jun	64,709	1,026,836	33,596	62,836	0.5192	0.9710	0.4065
Jul	64,306	833,561	27,056	260	0.4207	0.0040	0.2724
Aug	64,159	744,479	25,005	0	0.3897	0.0000	0.2718
Sep	64,301	880,175	27,517	36,303	0.4279	0.5646	0.3501
Oct	64,814	1,164,043	39,520	246,318	0.6098	3.8004	0.7988
Nov	66,195	3,690,095	124,433	960,548	1.8798	14.5109	2.2841
Dec	67,248	8,565,321	266,125	1,919,432	3.9574	28.5426	4.2300
Annual	65,873	51,715,819					

Regression Output:

Constant		**0.2718005**
Std Err of Y Est		0.212364268
R Squared		0.986918801
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**0.138678**	
Std Err of Coef.	0.005048822	
"t" Statistic(s)	27.4673610	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	62.51	8.9404	67,377	602,379
Feb	57.51	8.2474	67,632	557,785
Mar	43.73	6.3359	67,489	427,601
Apr	28.78	4.2623	66,677	284,194
May	16.30	2.5320	65,574	166,035
Jun	5.55	1.0420	64,709	67,427
Jul	0.65	0.3613	64,306	23,234
Aug	1.19	0.4364	64,159	28,002
Sep	15.58	2.4319	64,301	156,376
Oct	26.25	3.9122	64,814	253,562
Nov	41.45	6.0205	66,195	398,524
Dec	59.70	8.5507	67,248	575,016
WINTER	62.51	**8.9404**	67,419	602,755

Schedule HEW 4.1

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: ***KANSAS CITY*** ***CLASS: Residential (RSM)***

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	352,908	60,465,801	1,858,433	12,680,899	5.2661	35.9326	5.2722
Feb	354,154	63,515,164	2,061,156	13,531,200	5.8199	38.2071	5.5852
Mar	354,687	49,435,090	1,687,143	11,025,656	4.7567	31.0856	4.6051
Apr	351,715	28,917,373	980,060	6,426,239	2.7865	18.2712	2.8414
May	346,989	14,695,101	473,899	2,929,759	1.3657	8.4434	1.4886
Jun	343,184	6,722,847	220,592	416,600	0.6428	1.2139	0.4938
Jul	340,294	5,565,549	180,144	0	0.5294	0.0000	0.3267
Aug	338,850	4,941,745	167,540	0	0.4944	0.0000	0.3267
Sep	339,034	5,678,235	176,767	381,754	0.5214	1.1260	0.4817
Oct	341,593	6,892,503	234,330	1,418,665	0.6860	4.1531	0.6983
Nov	346,442	19,964,109	673,512	5,014,472	1.9441	14.4742	2.3188
Dec	351,094	48,999,738	1,535,107	10,764,697	4.3724	30.6604	4.5466
Annual	346,745	315,793,255					

Regression Output:

Constant		**0.32674414**
Std Err of Y Est		0.201273856
R Squared		0.991463127
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**0.137630**	
Std Err of Coef.	0.004038548	
"t" Statistic(s)	34.0791597	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	9.4089	352,908	3,320,459
Feb	62.57	8.9377	354,154	3,165,312
Mar	48.08	6.9445	354,687	2,463,109
Apr	31.17	4.6160	351,715	1,623,514
May	16.98	2.6643	346,989	924,490
Jun	5.66	1.1060	343,184	379,557
Jul	0.82	0.4402	340,294	149,800
Aug	1.73	0.5651	338,850	191,491
Sep	16.83	2.6424	339,034	895,872
Oct	28.57	4.2594	341,593	1,454,977
Nov	45.86	6.6380	346,442	2,299,686
Dec	66.63	9.4973	351,094	3,334,436
WINTER	66.63	**9.4973**	352,719	3,349,866

Schedule HEW 4.2

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: ***ST. JOSEPH*** ***CLASS:*** ***Residential (RSM)***

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	25,217	4,576,082	140,699	916,371	5.5795	36.3394	5.5698
Feb	25,303	4,858,579	155,647	959,109	6.1592	37.9049	5.7955
Mar	25,240	3,702,835	124,858	831,072	4.9468	32.9268	5.0778
Apr	24,869	2,185,678	74,605	472,144	2.9999	18.9852	3.0676
May	24,560	1,116,565	36,184	223,525	1.4733	9.1012	1.6425
Jun	24,246	478,844	15,423	36,865	0.6361	1.5204	0.5495
Jul	24,090	386,694	12,973	0	0.5385	0.0000	0.3303
Aug	23,963	353,875	11,808	0	0.4928	0.0000	0.3303
Sep	24,055	409,820	12,689	24,417	0.5275	1.0151	0.4767
Oct	24,204	490,959	16,930	90,492	0.6995	3.7387	0.8694
Nov	24,544	1,478,064	49,818	327,316	2.0297	13.3359	2.2531
Dec	24,945	3,597,869	112,030	740,659	4.4911	29.6917	4.6113
Annual	24,603	29,635,864					

Regression Output:

Constant		**0.3303207**
Std Err of Y Est		0.188627014
R Squared		0.993262056
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**0.144182**	
Std Err of Coef.	0.003755283	
"t" Statistic(s)	38.3944304	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	9.8448	25,217	248,255
Feb	62.57	9.3512	25,303	236,612
Mar	48.08	7.2631	25,240	183,320
Apr	31.17	4.8238	24,869	119,962
May	16.98	2.7792	24,560	68,257
Jun	5.66	1.1467	24,246	27,802
Jul	0.82	0.4492	24,090	10,821
Aug	1.73	0.5800	23,963	13,900
Sep	16.83	2.7562	24,055	66,301
Oct	28.57	4.4502	24,204	107,712
Nov	45.86	6.9420	24,544	170,385
Dec	66.63	9.9374	24,945	247,888
WINTER	66.63	**9.9374**	25,155	249,975

Schedule HEW 4.3

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: JOPLIN **CLASS: SGSM**

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	12,658	4,976,646	153,941	378,684	12.1615	29.9166	11.8176
Feb	12,604	5,086,966	164,760	393,235	13.0720	31.1993	12.2612
Mar	12,477	3,980,577	135,361	313,743	10.8489	25.1457	10.1676
Apr	12,164	2,255,010	76,766	184,540	6.3109	15.1710	6.7179
May	11,857	1,357,872	44,089	91,058	3.7184	7.6797	4.1270
Jun	11,664	774,362	25,262	10,673	2.1658	0.9150	1.7875
Jul	11,501	646,545	21,356	38	1.8569	0.0033	1.4722
Aug	11,403	645,820	21,783	0	1.9103	0.0000	1.4710
Sep	11,374	729,420	22,806	5,925	2.0051	0.5210	1.6512
Oct	11,442	799,017	27,231	43,089	2.3799	3.7659	2.7734
Nov	11,827	1,765,144	59,302	168,697	5.0141	14.2637	6.4041
Dec	12,223	4,144,346	128,888	348,718	10.5447	28.5295	11.3379
Annual	11,933	27,161,725					

Regression Output:

Constant		**1.4710279**
Std Err of Y Est		0.699842822
R Squared		0.977332810
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**0.345847**	
Std Err of Coef.	0.016655664	
"t" Statistic(s)	20.7645439	

MISSOURI GAS ENERGY
Case No. GR-2009-0355
JOPLIN **SGSM**

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	62.51	23.0896	12,658	292,269
Feb	57.51	21.3612	12,604	269,236
Mar	43.73	16.5941	12,477	207,045
Apr	28.78	11.4228	12,164	138,947
May	16.30	7.1078	11,857	84,277
Jun	5.55	3.3918	11,664	39,562
Jul	0.65	1.6942	11,501	19,485
Aug	1.19	1.8816	11,403	21,456
Sep	15.58	6.8582	11,374	78,005
Oct	26.25	10.5497	11,442	120,709
Nov	41.45	15.8075	11,827	186,956
Dec	59.70	22.1176	12,223	270,344
WINTER	62.51	**23.0896**	12,495	288,505

Schedule HEW 4.4

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: KANSAS CITY **CLASS: SGSM**

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	49,628	23,117,740	712,023	1,806,075	14.3472	36.3923	14.4188
Feb	49,643	24,118,114	788,215	1,882,520	15.8777	37.9212	14.9599
Mar	49,268	18,972,004	640,710	1,538,170	13.0046	31.2205	12.5883
Apr	48,317	11,005,372	374,487	886,281	7.7506	18.3430	8.0304
May	47,004	6,009,699	194,165	402,146	4.1308	8.5556	4.5663
Jun	45,994	3,315,174	107,845	47,953	2.3448	1.0426	1.9071
Jul	45,276	2,858,270	93,410	0	2.0631	0.0000	1.5381
Aug	44,703	2,661,641	89,380	0	1.9994	0.0000	1.5381
Sep	44,613	3,082,572	97,198	49,730	2.1787	1.1147	1.9327
Oct	44,829	3,464,946	116,767	190,677	2.6047	4.2534	3.0436
Nov	45,909	7,600,458	256,282	681,944	5.5824	14.8543	6.7956
Dec	47,494	17,956,013	557,269	1,443,909	11.7335	30.4019	12.2986
Annual	46,890	124,162,003					

Regression Output:

Constant	1.5381234
Std Err of Y Est	0.633482440
R Squared	0.987267022
No. of Observations	12
Degrees of Freedom	10
X Coefficient(s)	0.353939
Std Err of Coef.	0.012700784
"t" Statistic(s)	27.8675034

MISSOURI GAS ENERGY
Case No. GR-2009-0355
KANSAS CITY **SGSM**

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	24.8943	49,628	1,235,453
Feb	62.57	23.6825	49,643	1,175,673
Mar	48.08	18.5567	49,268	914,250
Apr	31.17	12.5686	48,317	607,279
May	16.98	7.5496	47,004	354,861
Jun	5.66	3.5421	45,994	162,914
Jul	0.82	1.8299	45,276	82,851
Aug	1.73	2.1511	44,703	96,163
Sep	16.83	7.4933	44,613	334,298
Oct	28.57	11.6516	44,829	522,328
Nov	45.86	17.7686	45,909	815,738
Dec	66.63	25.1217	47,494	1,193,126
WINTER	66.63	25.1217	48,922	1,228,993

Schedule HEW 4.5

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: ST. JOSEPH **CLASS: SGSM**

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	3,551	2,048,716	63,465	130,874	17.8724	36.8556	17.8648
Feb	3,550	2,171,168	69,928	135,319	19.6979	38.1181	18.4299
Mar	3,547	1,575,837	53,481	108,973	15.0778	30.7226	15.1197
Apr	3,454	906,383	30,782	59,612	8.9120	17.2587	9.0933
May	3,389	445,258	14,382	25,415	4.2436	7.4993	4.7250
Jun	3,390	241,387	7,951	1,703	2.3455	0.5025	1.5933
Jul	3,356	211,916	6,899	0	2.0556	0.0000	1.3684
Aug	3,327	197,667	6,556	0	1.9705	0.0000	1.3684
Sep	3,302	222,700	6,916	3,332	2.0945	1.0091	1.6200
Oct	3,310	260,282	8,975	15,175	2.7116	4.5846	3.4204
Nov	3,372	656,847	22,157	53,871	6.5708	15.9759	8.5191
Dec	3,449	1,619,726	50,047	103,039	14.5106	29.8750	14.7403
Annual	3,416	10,557,867					

Regression Output:

Constant		**1.36838273**
Std Err of Y Est		0.877583103
R Squared		0.984896735
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**0.447596**	
Std Err of Coef.	0.017527770	
"t" Statistic(s)	25.5364154	

MISSOURI GAS ENERGY
Case No. GR-2009-0355
ST. JOSEPH SGSM
Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	30.9049	3,551	109,743
Feb	62.57	29.3725	3,550	104,272
Mar	48.08	22.8903	3,547	81,192
Apr	31.17	15.3177	3,454	52,907
May	16.98	8.9706	3,389	30,401
Jun	5.66	3.9026	3,390	13,230
Jul	0.82	1.7374	3,356	5,831
Aug	1.73	2.1436	3,327	7,132
Sep	16.83	8.8994	3,302	29,386
Oct	28.57	14.1580	3,310	46,863
Nov	45.86	21.8937	3,372	73,825
Dec	66.63	31.1925	3,449	107,583
WINTER	66.63	**31.1925**	3,517	109,693

Schedule HEW 4.6

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: JOPLIN **CLASS: LGSM**

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	31	430,162	13,337	906	430.2365	29.2339	380.0921
Feb	32	492,558	16,026	1,015	500.8184	31.7138	406.1604
Mar	30	273,736	9,306	789	310.2163	26.3031	349.2844
Apr	32	177,751	6,094	498	190.4523	15.5493	236.2436
May	32	150,110	4,869	264	152.1475	8.2537	159.5539
Jun	32	96,169	3,096	37	96.7591	1.1653	65.0421
Jul	31	88,064	2,895	0	93.3775	0.0017	72.8099
Aug	31	82,742	2,798	0	90.2627	0.0000	72.7924
Sep	31	94,216	2,923	15	94.3059	0.4763	77.7989
Oct	31	95,358	3,246	84	104.7153	2.7024	101.1999
Nov	30	140,771	4,778	384	159.2784	12.7840	207.1747
Dec	31	290,674	9,083	869	293.0096	28.0290	367.4272
Annual	31	2,412,311					

Regression Output:

Constant		**72.792399647**
Std Err of Y Est		49.127391623
R Squared		0.891060333
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**10.511775**	
Std Err of Coef.	1.162292723	
"t" Statistic(s)	9.0439996	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	62.51	729.8744	31	22,626
Feb	57.51	677.3392	32	21,675
Mar	43.73	532.4486	30	15,973
Apr	28.78	375.2687	32	12,009
May	16.30	244.1174	32	7,812
Jun	5.55	131.1736	32	4,198
Jul	0.65	79.5765	31	2,467
Aug	1.19	85.2720	31	2,643
Sep	15.58	236.5308	31	7,332
Oct	26.25	348.7310	31	10,811
Nov	41.45	508.5405	30	15,256
Dec	59.70	700.3307	31	21,710
WINTER	62.51	**729.8744**	31	22,869

Schedule HEW 4.7

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: KANSAS CITY **CLASS:** LGSM

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	248	2,040,670	64,416	9,033	259.7414	36.4220	256.3245
Feb	246	2,030,385	66,789	9,456	271.5011	38.4391	268.7084
Mar	247	1,632,798	55,222	7,576	223.5714	30.6736	221.0338
Apr	243	1,058,040	36,170	4,404	148.8468	18.1217	143.9747
May	242	584,025	18,904	1,933	78.1169	7.9883	81.7633
Jun	244	334,868	10,868	173	44.5424	0.7077	37.0659
Jul	244	284,063	9,386	0	38.4655	0.0000	32.7213
Aug	245	280,726	8,722	0	35.6018	0.0000	32.7213
Sep	245	315,924	9,805	289	40.0224	1.1785	39.9567
Oct	243	404,363	13,763	1,266	56.6378	5.2085	64.6976
Nov	244	857,856	28,707	3,999	117.6531	16.3902	133.3448
Dec	245	1,742,362	54,662	7,693	223.1089	31.4006	225.4973
Annual	245	11,546,070					

Regression Output:

Constant		**32.721294293**
Std Err of Y Est		6.906810523
R Squared		0.995005301
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**6.139242**	
Std Err of Coef.	0.137548778	
"t" Statistic(s)	44.6332001	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	437.8446	248	108,585
Feb	62.57	416.8268	246	102,539
Mar	48.08	327.9161	247	80,995
Apr	31.17	224.0508	243	54,444
May	16.98	136.9930	242	33,152
Jun	5.66	67.4808	244	16,465
Jul	0.82	37.7825	244	9,219
Aug	1.73	43.3545	245	10,622
Sep	16.83	136.0163	245	33,324
Oct	28.57	208.1438	243	50,579
Nov	45.86	314.2465	244	76,676
Dec	66.63	441.7889	245	108,238
WINTER	66.63	**441.7889**	246	108,827

Schedule HEW 4.8

MISSOURI GAS ENERGY
Case No. GR-2009-0355
REGRESSION ANALYSIS OF BILLING MONTH USAGE

DISTRICT: ST. JOSEPH **CLASS: LGSM**

Billing Month	Customer Numbers	Total Ccf	Observed (U/D)	Actual (C*HDD/D)	Observed (U/C/D)	Actual (HDD/D)	Predicted (U/C/D)
Jan	27	240,020	7,430	981	275.1835	36.3286	285.7176
Feb	26	255,484	8,342	1,001	320.8499	38.4972	300.9171
Mar	27	233,036	7,737	923	286.5653	34.1916	270.7393
Apr	27	120,509	4,106	489	152.0769	18.1164	158.0701
May	27	83,782	2,713	258	100.4773	9.5480	98.0151
Jun	27	30,321	998	50	36.9708	1.8581	44.1172
Jul	26	36,590	1,193	0	45.8765	0.0000	31.0940
Aug	26	31,811	1,057	0	40.6366	0.0000	31.0940
Sep	26	37,143	1,155	37	44.4385	1.4091	40.9703
Oct	26	40,936	1,412	95	54.2918	3.6399	56.6058
Nov	26	75,304	2,528	318	97.2374	12.2263	116.7871
Dec	26	178,023	5,481	743	210.8119	28.5630	231.2888
Annual	26	1,362,959					

Regression Output:

Constant		**31.093982342**
Std Err of Y Est		14.072197952
R Squared		0.984385336
No. of Observations		12
Degrees of Freedom		10
X Coefficient(s)	**7.008896**	
Std Err of Coef.	0.279147253	
"t" Statistic(s)	25.1082405	

Coincident Peak Day Demand Estimate

MONTH	MAX HDD	Ccf/C/D	CUSTOMERS	Ccf/DAY
Jan	65.99	493.6050	27	13,327
Feb	62.57	469.6100	26	12,210
Mar	48.08	368.1046	27	9,939
Apr	31.17	249.5262	27	6,737
May	16.98	150.1363	27	4,054
Jun	5.66	70.7773	27	1,911
Jul	0.82	36.8722	26	959
Aug	1.73	43.2334	26	1,124
Sep	16.83	149.0212	26	3,875
Oct	28.57	231.3659	26	6,016
Nov	45.86	352.4986	26	9,165
Dec	66.63	498.1080	26	12,951
WINTER	66.63	**498.1080**	26	13,117

Schedule HEW 4.9

Testimony Issues

THOMAS A. SOLT

Company	Case Number
St. Joseph Light and Power Company	ER-93-41 & GR-93-42
Payroll, Payoll Taxes, Management Incentive Plan, 401(k) Plan, Advertising	
Western Resources, Inc.	GR-93-240
Plant in Service, Depreciation Reserve, Depreciation Expense, Materials & Supplies, Prepayments, customer advances, customer deposits, property taxes, and property insurance	
The Empire District Electric Company	ER-94-174
Tariff Changes	
Missouri Gas Energy	GR-95-33
Recovery Mechanism for FERC Transition Costs	
Missouri Gas Energy	GR-98-140
Tariff Issues (delayed payment rate)	
Missouri Universal Service Fund	TO-98-329
USF Surcharge	
Southwestern Bell Telephone Company	TT-2000-258
Local Plus availability, ordering, and tariff approval	
Southwestern Bell Telephone Company	TO-2000-667
Local Plus	
Ozark Telephone Company	TT-2001-117 & TC-2001-402

Rate Design

Relay Missouri Proceeding	TO-2003-0171
Relay Surcharge	
Fidelity Telephone Company	IR-2004-0272
Rate Design	
Missouri Gas Energy	GR-2006-0422
Class Cost of Service	
Union Electric Company d/b/a AmerenUE	GR-2007-0003
Class Cost of Service	
Laclede Gas Company	GT-2009-0026
Bad Debts through PGA	
KCPL Steam	HR-2009-0092
Revenues	

List of Cases in which prepared testimony was presented by:
DANIEL I. BECK

Company Name	Case No.
Union Electric Company	EO-87-175
The Empire District Electric Company	EO-91-74
Missouri Public Service	ER-93-37
St. Joseph Power & Light Company	ER-93-41
The Empire District Electric Company	ER-94-174
Union Electric Company	EM-96-149
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Kansas City Power & Light Company	ET-97-113
Associated Natural Gas Company	GR-97-272
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Missouri Gas Energy	GT-98-237
Ozark Natural Gas Company, Inc.	GA-98-227
Laclede Gas Company	GR-98-374
St. Joseph Power & Light Company	GR-99-246
Laclede Gas Company	GR-99-315
Utilicorp United Inc. & St. Joseph Light & Power Co.	EM-2000-292
Union Electric Company d/b/a AmerenUE	GR-2000-512
Missouri Gas Energy	GR-2001-292
Laclede Gas Company	GR-2001-629
Union Electric Company d/b/a AmerenUE	GT-2002-70
Laclede Gas Company	GR-2001-629
Laclede Gas Company	GR-2002-356
Union Electric Company d/b/a AmerenUE	GR-2003-0517
Missouri Gas Energy	GR-2004-0209
Atmos Energy Corporation	GR-2006-0387
Missouri Gas Energy	GR-2006-0422
Union Electric Company d/b/a AmerenUE	GR-2007-0003
The Empire District Electric Company	EO-2007-0029/EE-2007-0030
Laclede Gas Company	GR-2007-0208
The Empire District Electric Company	EO-2008-0043
Missouri Gas Utility, Inc.	GR-2008-0060

The Empire District Electric Company	ER-2008-0093
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power & Light Company	ER-2009-0089
KCP&L Greater Missouri Operations Company	ER-2009-0090

SUMMARY OF TESTIMONY
ANNE M. ALLEE

Company Name	Case Number	Issues
Choctaw Telephone Company	TR-91-336	Payroll; Payroll Taxes; Employee Pensions/Benefits; Voucher Analysis; Other Misc. Expenses
Laclede Gas Company	GR-92-165	Payroll; Payroll Taxes; Employee Pensions and Benefits
United Cities Gas Company	GR-93-47	Rate Base; CWC; Dues & Donations; Misc. Expenses
St. Louis County Water Company	WR-93-204	Rate Base; CWC; Dues & Donations; Misc. Expenses
Ozark Natural Gas Company	GA-96-264	Cost of Gas per Dth; Reliability of Transportation
Missouri Gas Energy Company	GR-96-285	Natural Gas Storage Inventory Prices
St. Joseph Light and Power Company	GR-96-47	Gas Purchasing Practices
Union Electric Company	GR-97-393	Natural Gas Storage Inventory Prices
Missouri Public Service	GR-96-192	Winter Storage Allocation; Overrun Penalties
Missouri Gas Energy	GR-98-140	Natural Gas Storage Inventory Prices
Ozark Natural Gas Company	GA-98-227	Cost of Gas per Dth; Reliability of Supply and Transportation
St. Joseph Light and Power Company	GR-99-246	Natural Gas Inventory Prices
UtiliCorp United Inc. and St. Joseph Light and Power Company	EM-2000-292	Conditions to be Made Part of Approved Merger
Atmos Energy Corporation and United Cities Gas Company	GR-2001-396 & GR-2001-397 (Consolidated)	Purchasing Practices – Neelyville; Purchasing Practices-Consolidated District; Deferred Carrying Cost Balance; Propane
Missouri Gas Energy	GR-2001-382, GR-2000-425, GR-99-304 & GR-98-167 (Consolidated)	Purchasing Practices; Refunds

Company Name	Case Number	Issues
Union Electric Company	GR-2003-0517	Gas Inventories
Missouri Gas Energy	GR-2004-0209	Gas Inventory, Capacity, Release and Gas Purchasing Practices
Missouri Gas Energy	GR-2006-0422	Gas Inventory, Uncollectible Expense and ACA documentation
Union Electric Company	GR-2007-0003	Gas Inventory, ACA documentation